

General and Comparative Endocrinology

An International Journal

Editors-in-Chief

AUBREY GORBMAN

E. J. W. BARRINGTON

*Published Under the Auspices of the Division of Comparative
Endocrinology of the American Society of Zoologists, and the
European Society for Comparative Endocrinology*

Volume 11

1968



ACADEMIC PRESS
New York and London

COPYRIGHT ©, 1969, BY ACADEMIC PRESS, INC.

ALL RIGHTS RESERVED

NO PART OF THIS VOLUME MAY BE REPRODUCED IN ANY FORM,
BY PHOTOSTAT, MICROFILM, OR ANY OTHER MEANS, WITHOUT
WRITTEN PERMISSION FROM THE PUBLISHERS.

CONTENTS OF VOLUME 11

NUMBER 1, AUGUST 1968

T. P. SINGH. Thyroidal ^{131}I Uptake and TSH Potency of the Pituitary in Response to Graded Doses of Methyltestosterone in <i>Myxus vittatus</i> (Bloch) . . .	1
CHARLES S. NICOLL AND HOWARD A. BERN. Further Analysis of the Occurrence of Pigeon Crop Sac-Stimulating Activity (Prolactin) in the Vertebrate Adenohypophysis	5
KADABA V. PRAHLAD. Induced Metamorphosis: Rectification of a Genetic Disability by Thyroid Hormone in the Mexican Axolotl <i>Siredon mexicanum</i> . . .	21
EDWIN P. MARKS. Regenerating Tissues of the Cockroach <i>Leucophaea maderae</i> : Effects of Humoral Stimulation <i>in Vitro</i>	31
HERBERT P. MÜLLER AND FRANZ ENGELMANN. Studies on the Endocrine Control of Metabolism in <i>Leucophaea maderae</i> (Blattaria) II. The Effect of the Corpora Cardiaca on Fat-Body Respiration	43
DIANE H. RUSSELL. Acetylcholinesterase in the Hypothalamo-Hypophyseal Axis of the White-Crowned Sparrow, <i>Zonotrichia leucophrys gambelii</i>	51
FRÉDÉRIC R. RODESCH ET YVES A. FONTAINE. Estimation des activités comparées de diverses préparations thyroïdiques sur des cellules isolées de thyroïde de mouton	64
CLIFF W. HILL AND PAUL O. FROMM. Response of the Interrenal Gland of Rainbow Trout (<i>Salmo gairdneri</i>) to Stress	69
D. J. MCWHINNIE AND J. R. CORTELYOU. Influence of Parathyroid Extract on Blood and Urine Mineral Levels in Iguanid Lizards	78
K. G. ADIYODI AND HOWARD A. BERN. Neuronal Appearance of Neurosecretory Cells in the Pars Intercerebralis of <i>Periplaneta americana</i> (L.)	88
V. G. KRISHNAMURTHY. Histochemical and Biochemical Studies of the Corpuscles of Stannius of the Teleost Fish, <i>Colisa lalia</i>	92
D. M. ENSOR AND J. N. BALL. A Bioassay for Fish Prolactin (Paralactin) . . .	104
HISSAO FUJITA AND YOSHIHARU HONMA. Some Observations on the Fine Structure of the Endostyle of Larval Lampreys, Ammocoetes of <i>Lampetra japonica</i> . . .	111
ADRIEN G. BAUCHAU, JACQUES C. MENGEOT, ET MYRIAM A. OLIVIER. Action de la sérotonine et de l'hormone diabétogène des crustacés sur la phosphorylase musculaire	132
ROBERT ORTMAN AND MARTIN I. PARKER. Thyrotropic Activity in Separated Rostral and Caudal Halves of the Pars Distalis of <i>Rana pipiens</i>	139
S. E. LEVINA. Endocrine Features in the Development of Human Hypothalamus, Hypophysis, and Placenta	151
Y. A. FONTAINE ET E. BURZAWA-GERARD. Fractionnement d'hypophyses de rats et étude des activités thyroïdiques, gonadotropes et hétérothyroïdiques des produits purifiés	160
A. HOWE AND D. S. MAXWELL. Electron Microscopy of the Pars Intermedia of the Pituitary Gland in the Rat	169
N. M. G. BHAKTHAN AND LAWRENCE I. GILBERT. Effects of Some Vertebrate Hormones on Lipid Mobilization in the Insect Fat Body	186
ERNEST FOLLENIUS. Cytologie et cytophysiologie des cellules interstitielles de l'Épinoche: <i>Gasterosteus aculeatus</i> L. Etude au microscope électronique . .	198

KATY HAFFEN AND LISE CÉDARD. Etude, en culture organotypique <i>in vitro</i> , du métabolisme de la déhydroépiandrosterone et de la testostérone radioactives, par les gonades normales et intersexuées de l'embryon de poulet	220
FRANÇOIS-CLAUDE HOLDER. Mise en évidence et dosage de l'activité de type ocytotique d'homogénats totaux et de fractions granulaires du système préoptico-hypophysaire de l'Anguille (<i>Anguilla anguilla</i> L.)	235

NOTES

D. K. O. CHAN, I. CHESTER JONES, AND R. N. SMITH. The Effect of Mammalian Calcitonin on the Plasma Levels of Calcium and Inorganic Phosphate in the European Eel (<i>Anguilla anguilla</i> L.)	243
ANDRZEJ BARTKE. The Response of Dwarf Mice to Murine Thyroid-Stimulating Hormone	246
MICHAEL D. LAGIOS. Granular Epithelioid Cell Involution in the Renal Arteries of a Euryhaline Fish, <i>Cymatogaster</i> , Adapted to Hypotonic Salinities	248
BETTY L. RUBIN. Assay of Δ^5 - 3β -Hydroxysteroid Dehydrogenase in Fish Ovaries	251
W. B. QUAY. Specificity and Structure-Activity Relationships in the <i>Xenopus</i> larval Melanophore Assay for Melatonin	253
ERRATUM	255

NUMBER 2, OCTOBER 1968

R. SHEELA AND K. R. PANDALAI. Reaction of the Paraventricular Nucleus to Dehydration in the Garden Lizard, <i>Calotes versicolor</i>	257
L. TASHIMA AND G. F. CAHILL, JR. Effects of Insulin in the Toadfish, <i>Opsanus tau</i>	262
ASHA CHANDOLA AND J. P. THAPLIYAL. Further Studies on the Regulation of the Body Weight of Spotted Munia, <i>Lonchura punctulata</i>	272
AMOS G. GONA. Radioiodine Studies on Prolactin Action in Tadpoles	278
ROGER GORDON. Observations on the Effect of the Neuro-Endocrine System of <i>Blatta orientalis</i> L. on the Midgut Protease Activity of the Adult Female and the Level of Infestation with the Nematode <i>Hammerschmidtella diezingi</i> (Hammerschmidt, 1838)	284
FUMIO YAMAZAKI AND EDWARD M. DONALDSON. The Effects of Partially Purified Salmon Pituitary Gonadotropin on Spermatogenesis, Vitellogenesis, and Oviposition in Hypophysectomized Goldfish (<i>Carassius auratus</i>)	292
MICHAEL D. LAGIOS. Tetrapod-like Organization of the Pituitary Gland of the Polypteriform Fishes, <i>Calamoichthys calabaricus</i> and <i>Polypterus palmas</i>	300
FRANÇOISE GOGAN. Sensibilité hypothalamique à la testostérone chez le Canard	316
ANDERS ENEMAR, BO ESSVIK, AND ROLF KLANG. Growth-Promoting Effects of Ovine Somatotropin and Prolactin in Tadpoles of <i>Rana temporaria</i>	328
ALEJANDRO F. DE NICOLA, MICHAEL CLAYMAN, AND ROSE M. JOHNSTONE. <i>In Vitro</i> Uptake of Ascorbic Acid-1- ^{14} C by Adrenal Glands of Different Species of Animals	332
PAUL LICHT AND HERMIEN HOYER. Somatotropic Effects of Exogenous Prolactin and Growth Hormone in Juvenile Lizards (<i>Lacerta s. sicula</i>)	338
DAPHNE J. OSBORNE, D. B. CARLISLE, AND PEGGY E. ELLIS. Protein Synthesis in the Fat Body of the Female Desert Locust, <i>Schistocerca gregaria</i> Forsk., in Relation to Maturation	347

J. G. M. SHIRE AND S. G. SPICKETT. A Strain Difference in the Time and Mode of Regression of the Adrenal X Zone in Female Mice	355
D. R. IDLER AND H. C. FREEMAN. Binding of Testosterone, 1α -Hydroxycorticosterone and Cortisol by Plasma Proteins of Fish	366
TETSUYA HIRANO AND SEIHIRO UTIDA. Effects of ACTH and Cortisol on Water Movement in Isolated Intestine of the Eel, <i>Anguilla japonica</i>	373
L. LEIBSON AND E. M. PLISetskAYA. Effect of Insulin on Blood Sugar Level and Glycogen Content in Organs of Some Cyclostomes and Fish	381
SHASHI V. GOSWAMI AND BANGALORE I. SUNDARARAJ. Effect of Estradiol Benzoate, Human Chorionic Gonadotropin, and Follicle-Stimulating Hormone on Unilateral Ovariectomy-Induced Compensatory Hypertrophy in Catfish, <i>Heteropneustes fossilis</i> (Bloch)	393
SHASHI V. GOSWAMI AND BANGALORE I. SUNDARARAJ. Compensatory Hypertrophy of the Remaining Ovary after Unilateral Ovariectomy at Various Phases of the Reproductive Cycle of Catfish, <i>Heteropneustes fossilis</i> (Bloch)	401
NICOLE DHAINAUT-COURTOIS. Étude histologique et ultrastructurale des cellules nerveuses du ganglion cérébral de <i>Nereis pelagica</i> L. (Annélide Polychète). Comparaison entre les types cellulaires I-VI et ceux décrits antérieurement chez les Nereidae	414
MASAHIKO FUJINO, WILLIAM M. LAMKIN, JAMES DONALD MAYFIELD, AND DARRELL N. WARD. Trypsin Digestion of Native Ovine Luteinizing Hormone and Studies on the Glycopeptide Fragments	444
ALLAN BERLIND AND I. M. COOKE. Effect of Calcium Omission on Neurosecretion and Electrical Activity of Crab Pericardial Organs	458

NUMBER 3, DECEMBER 1968

H. M. CHARLTON. The Pineal Gland of <i>Xenopus laevis</i> , Daudin: a Histological, Histochemical, and Electron Microscopic Study	465
JEAN-GUY LEHOUX, T. SANDOR, A. LANTHIER, AND O. LUSIS. Metabolism of Exogenous Progesterone by Insect Tissue Preparations <i>in Vitro</i>	481
C. L. CHEN, E. J. BIXLER, A. I. WEBER, AND J. MEITES. Hypothalamic Stimulation of Prolactin Release from the Pituitary of Turkey Hens and Poults	489
M. ZUBER-VOGELI. Les variations cytologiques de l'hypophyse distale des femelles de <i>Nectophrynoides occidentalis</i>	495
E. W. EMMART AND A. E. WILHELMI. Immunochemical Studies with Prolactin-like Fractions of Fish Pituitaries	515
JEAN M. P. EDDY AND RONALD STRAHAN. The Role of the Pineal Complex in the Pigmentary Effector System of the Lampreys, <i>Mordacia mordax</i> (Richardson) and <i>Geotria australis</i> Gray	528
R. ACHER, J. CHAUVET, M. T. CHAUVET, AND D. CREPY. Molecular Evolution of Neurohypophysial Hormones: Comparison of the Active Principles of Three Bony Fishes	535
V. S. NEWCOMER. Accumulation of Radioiodine in Thyroids of Chickens	539
CHARLES C. RUST AND ROLAND K. MEYER. Effect of Pituitary Autografts on Hair Color in the Short-Tailed Weasel	548
EDWARD M. DONALDSON AND ULF H. M. FAGERLUND. Changes in the Cortisol Dynamics of Sockeye Salmon (<i>Oncorhynchus nerka</i>) Resulting from Sexual Maturation	552
MARIAN JUTISZ ET CLAUDE COURTE. Hormone lutéinisante (LH) de mouton.	

I. Obtention à l'état apparemment homogène. Étude physico-chimique et biologique	562
PEDRO DE LA LLOSA, CLAUDE COURTE, ET MARIAN JUTISZ. Hormone lutéinisante (LH) de mouton II. Étude de la composition et des groupes terminaux . .	575
E. W. EMMART AND R. W. BATES. The Use of Immunochemical Binding and Sephadex Filtration in Procedures toward the Purification of Ovine and Piscine "Prolactin"	58
VOLKER BLÜM. Immunological Determination of Injected Mammalian Prolactin in Cichlid Fishes	595
MARTHA E. SUCHESTON AND MARVIN S. CANNON. Nomenclature of a Developmental Zone of the Adrenal Cortex of Mammals	603
AUTHOR INDEX	608
SUBJECT INDEX	610